

wherein removing a second portion of the metal oxide layer is performed in a reaction chamber in the absence of RF activation.

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1415. The method of claim ¹³14, wherein heating the semiconductor substrate is at a temperature between about 625 degrees Celsius to 675 degrees Celsius.

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1516. The method of claim ¹³14, wherein the semiconductor substrate comprises silicon.

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1617. The method of claim ¹⁵16, further comprising:
forming a first interfacial oxide layer under the metal oxide layer;
removing at least a portion of the first interfacial oxide after removing the portion of the metal oxide layer.

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1718. (Amended) The method of claim ¹⁶17, wherein removing at least a portion of the first interfacial oxide layer is performed using a species containing hydrogen and fluorine.

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1819. The method of claim ¹⁷18, further comprising forming a second interfacial oxide over the semiconductor substrate.

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1921. (Amended) A method of forming a metal oxide comprising:
providing a semiconductor substrate;
forming a metal oxide layer over the semiconductor substrate; and
removing a portion of the metal oxide layer by heating the semiconductor substrate and
flowing a gaseous halide;
wherein removing a portion of the metal oxide layer is performed in a reaction chamber in the absence of RF activation.

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2022. The method of claim ¹⁹21, wherein the gaseous halide comprises hydrogen.

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2123. The method of claim ²⁰22, wherein the gaseous halide is HCl.

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2224. The method of claim ²⁰22, wherein the gaseous halide is HF.

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2325. The method of claim ¹⁹21, wherein the metal oxide contains hafnium and oxygen.